VOL. 1. NO. 8.

AMERICAN
VETERINARY REVIEW.

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PUBLISHED BY THE

UNITED STATES
VETERINARY MEDICAL ASSOCIATION.

OCTOBER, 1877.

New York:
STYLES & CASH, GENERAL STEAM PRINTERS & STATIONERS, 77 EIGHTH AVE.

1877.

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AMERICAN VETERINARY REVIEW,

OCTOBER, 1877.

ORIGINAL ARTICLES.

ANATOMY OF REGIONS.

Translated from Peuch and Toussaint's, Précis de Chirurgie Vétérinaire.

BY A. LIAUTARD, M. D. V. S.

[*Continued from Page* 205.]

CHAPTER II.

LATERAL FACES OF THE HEAD.

The lateral faces of the head are bound forward by the anterior face, behind by the posterior border of the inferior maxillary, above by the superior border of the neck, and downwards they extend to the commissure of the lips.

They form the parotidean and temporal regions, that of the cheeks and of the temporo-maxillary articulation. All these regions are arranged by pairs, one on each side of the median line, and are asymmetrical.

Upon the limit of the anterior and lateral face we find two apparatuses of senses: the *auricular* or *auditive*, and the *ocular;* we will consider them after the description of the lateral faces.

SECTION I.—PAROTIDEAN REGION.

Intermediate to the head and neck, its extent is susceptible of many variations, as the position of the head changes, either being flexed or extended upon the neck; its base is represented by the parotid gland. The complexity of the parts which compose it, their importance, and the frequency of lesions and abnormal growths in that region, as well as the presence of the guttural pouches which sometimes have to be open, render the parotid region one of the most important of the economy.

It is rectangular, elongated from above below; limited above by the ear, below by the glosso-facial vein, forward by the posterior border of the maxillary, behind by the transverse process of the atlas and a vertical line extending from that process.

As external form, we find at the base of the ear and in front a small depression, bound posteriorly by a small prominence. The middle part is flat and slightly depressed between the posterior border of the maxillary and the transverse process of the atlas. Its inferior part seems to pass under the thick border of the maxillary, and runs towards that of the opposite side as far as the inferior border of the neck and of the throat.

The different layers which compose it are: 1st, the skin; 2d, a subcutaneous connective layer; 3d, a muscular layer; 4th, the parotid gland; 5th, several muscles; 6th, the guttural pouches; 7th, blood vessels and nerves.

1st. The *skin* is thin, covered with short hairs, very loose, and shows plainly the hollows and projections of the organs placed underneath. It is only in low bred horses, or in young animals at the time when they are suffering or recovering from strangles, that this region is thick and not well defined.

2d. The subcutaneous connective tissue is not very abundant in well bred animals, but more so in low breed, when then it is sometimes infiltrated with fat.

3d. The *panniculus carnosus* muscle extends over the whole region, but it is then reduced in thickness to only a few fibres spread over the parts and united together by a thin aponeurosis. Its greatest thickness is at the posterior and inferior regions, on a level with the union of the external maxillary and jugular veins.

Not to needlessly complicate our description, we will include in this chapter the parotido-auricular muscle. This muscle, of red strong color, runs in the direction of the great axis of the region, in the median part of which it is situated; it spreads downwards as far as its lower quarter, and superiorly its fibres form a thicker fasciculus much narrower as it goes to insert itself to the base of the conqua.

4th. The *parotid* is flat on its external surface, but the internal is very irregular to mould itself upon the muscles and blood vessels underneath.

The superior border is concave, and embraces the base of the conqua; the inferior is lodged in the angle formed by the glosso-facial and jugular vein; its anterior border is moulded upon the posterior border of the maxillary bone. Below the condyle of that bone, the gland covers the bone in an extend of two or three centimeters, where the facial and temporal nerves, and the temporal artery and veins make

their exit. The posterior border is limited behind by the transverse process of the atlas.

5th. The different organs forming the layer underneath the parotid are irregularly arranged. First, forward and above are found blood vessels and nerves, which we will speak of as we go further on. Immediately under the ear, and backwards, on a level with the middle of the transverse process of the atlas, the small oblique muscle,* covered by the tendon of the mastoido humeralis.† The inferior border of the small oblique runs obliquely upwards, to be inserted upon the mastoid process; it projects somewhat over the stylo-hyoideus or occipito-hyoideus muscle.

The direction of the fibres of the stylo hyoideus is perpendicular to that of the fibres of the small oblique, and it is easily felt by the finger running in front of the fibres of this short muscle; as above, one feels the styloid process of the occipital, while downwards, and a little forward, at a distance of about 2½ to 3 centimeters, upon an eminence of median size, is met the posterior border of the grand branch of the hyoid bone. It is in the space thus included between these two bones, in the very fibres of the occipito styloideus, that the puncture, to penetrate into the guttural pouches, must be made, which indeed lines the internal face of the muscle.

Altogether behind the stylo hyoideus, without well defined demarkation, one finds the superior part of the digastricus muscle, or stylo maxillaris, whose consistency is more marked than the other. This muscle runs soon forward and downwards, crossing obliquely the great axis of the region, and it reaches the anterior border of the gland, from under which it exits entirely at the antero-inferior angle.

Let us mention, also, in this layer, the superior border of the maxillary gland found at the posterior part, and towards the inferior third of the region. This gland is situated on a level somewhat deeper than the superior belly of the digastricus. It is separated from the deep face of the parotid by a thin aponeurosis, which is continued upwards with the tendon of the mastoido humeralis, and downwards with that of the sterno maxillaris, which passes over the surface of the digastricus, between it and the gland.

6th. The deepest organ of that region is the guttural pouch, kind of bladder placed upon the track of the Eustachian tubes, communicating on one side with the pharynx, and on the other with the middle ear.

The guttural pouch extends, specially in the supero-anterior part of

* Obliquus capritis posticus minor of Percival.
† Levator humeri of P.

the region, under the digastricus muscle and stylo hyoideus. In the lower region, on a corresponding plan of that pouch, we find the thyroid gland, the larynx and a part of the pharynx.

7th. *Blood Vessels and Nerves*, being numerous and important, they need a minutious description.

The *arteries* are the divisions of the *primitive carotid*, whose most elevated portion is concealed deeply under the posterior and inferior angles of the gland. These divisions are: 1st, the occipital; 2d, the internal carotid; 3d, the external carotid.

The *occipital* is not, in our point of view, very important; in its inferior third it is running along the internal carotid, then passes upwards under the transverse process of the atlas, and behind the guttural pouches, between the anterior straight muscles* of the head and the maxillary gland. One of its divisions, the mastoid, glides over the external surface of the styloid process of the occipital, under the small oblique muscle† of the head, and ramifies in that muscle.

The *internal carotid* is situated in a special fold of the posterior face of the guttural pouch, passing first directly upwards under the base of the cranium, then turning forward to reach the posterior foramen lacerum. It is in that last portion that it may be injured during the operation of hyo vertebrotomy, when the bistouri is carried in too deeply and too perpendicularly.

The *external carotid*, first situated under and behind the guttural pouch, at the internal face of the parotid, runs obliquely upwards in crossing the region, and becoming more and more superficial, covered by the jugular vein and its confluents, as far as the posterior border of the maxillary bone, where it divides into two terminal trunks, the *superficial temporal* and the *internal maxillary*. In this course, this artery gives a number of branches to the parotid, and two principal ones. 1st, the maxillo-muscular, which, rising from the carotid at obtuse angles, a little forward of its terminal division, runs downwards along the posterior border of the maxillary bone, and divides in two branches, one external going to the masseter muscle, one internal going to the internal pterygoid muscle. 2d, the posterior auricular, which passes to the base of the ear, lodged in the tissue of the parotid, which receives many of its branches; it looses itself in the external and middle ear.

The divisions of the external carotid, the *temporal trunk* and the *internal maxillary*, belong also by their origin to the parotid region; the last, however, soon assumes a very deep situation. The superficial

* Rectus capitis anticus, major and minor. Percival.

† Obliquus capitis minor. Percival.

temporal, the smallest of the two, runs a short course between the parotid, the guttural pouch and the neck of the condyle of the maxillary, then it divides in two branches, the sub-zygomatic, which goes to the masseter, and the anterior auricular, passing upwards through the parotid to ramify in that gland, the crotaphite muscle and the conqua.

The *veins* are numerous, and empty into the jugular or its affluents. The two roots of the jugular (temporal trunk and internal maxillary vein) unite together behind the neck of the maxillary to form this large vessel.

The position of these veins is entirely analogous to that of the arteries of the same name, though more superficial. The same can be said of the parotid portion of the jugular, which corresponds to the external carotid, and which receives the veins corresponding to the arteries given by this last vessel; the maxillo-muscular vein, the posterior auricular, and the parotid veins. All these vessels have a size double or triple of their arterial satellites. The jugular receives besides, towards its superior third, a second posterior auricular vein, which has no analogous amongst the arteries, and which follow a very superficial course, being lodged in a semi canal of the tissue of the gland.

The jugular vein, in its parotid portion, is sometimes so superficial that it is separated from the skin only by the panniculus carnosus and the parotido-auricularis muscle*; at other times it is covered by a thin layer of glandular tissue, and is detected only here and there through the region. In all cases, it is always easy to expose it, by pressure of the jugular in its groove; the oscillating movements that one can then give to the flow of blood will be transmitted readily as far as the base of the ear, and thus they allow not only to trace the size of the vein, but also its superficial or deep situation.

We may mention also amongst the veins of that region, the occipital vein, analogous to the artery of the same name. The glosso-facial vein, as we have already said, limits the inferior extremity of the gland which is received in the angle that it forms in joining the jugular.

The *nerves* are superficial or deep. Some are special to the region, others only run through it to reach other organs.

Directly under the skin are found the divisions of the first and second cervical pairs, going to the panniculus carnosus, the parotid and the ear. One of these branches coming from the second cervical pair passes, in going to the ear, over the surface of the tendon of the levator humeri; it is sufficiently large to give rise to violent pain when it is injured; another runs downwards, and crosses the direction of the gland to lay itself against the glosso-facial vein; it sends a branch to the cervical

* Abducens or deprimens aurem. Percival.

nerve, which comes out under the parotido-auricular muscle to lodge itself in the jugular groove.

The facial nerve runs through the parotid at its superior extremity; it comes out of the fallopian aqueduct, gives immediately the posterior and middle auricular nerve, both going towards the conqua, the first behind and the other in front; the nerve of the stylo hyoideus and of the digastricus, which runs downwards and forwards; upon the middle of the region, the anterior auricular nerve, which, concealed in the thickness of the gland, runs upwards behind the temporo maxillary articulation. In front of this last division rises the cervical nerve, whose course at the inferior and cervical part of the gland has already been mentioned. Then the facial nerve arrived upon the posterior border of the maxillary bone, where it meets the temporal branch furnished by the inferior maxillary nerve, it unites to it, and forms the sub-zygomatic plexus, which spreads itself over the surface of the cheek. All these nerves send branches to the parotid and guttural pouch.

The deep nerves found in that region are, the pneumogastic, spinal, superior ganglion of the sympathetic, which rest on the posterior wall of the guttural pouch with the internal carotid, the great hypoglossus and glosso-pharyngeal nerves, which soon assume a course upon the external face of the pouch under the great branch of the hyoid bone and stylo-hyoideus muscle.

DIFFERENCES.—In the *large ruminants*, the parotid region is not so well defined as it is in the horse; from the form and the spinal situation of the parotid it does not include all the portion which corresponds to the gland itself; indeed, we see the parotid extending forward in a peculiar manner over the cheek; the skin thicker and looser than in the horse, forms often longitudinal folds. The parotid is of a darker color, is narrower, and its superior lobe extends forward over the surface of the masseter. The guttural pouch is missing in all animals other than the solipeds.

The parotid of the *sheep* and *goat* is somewhat like that of the large ruminants. The duct of Stenon rises about the middle of the anterior border.

In the *pig*, the parotid spreads considerably posteriorly—its form is rounded. In the carnivorous this region is very small, and the gland parotid, which forms its base, is also very diminutive.

All these animals are provided with two jugular veins—the external analogous, in general distribution, to that of the horse; the occipital vein empties in the internal jugular.

[TO BE CONTINUED.]

BONE-SPAVIN.

A FEW PRACTICAL REMARKS ON THIS VERY COMMON DISEASE.

By D. McEachran, F.R.C.V.S., Principal of Montreal Veterinary College.

From time immemorial the different forms and degrees of exostosis resulting in anchylosis of one or more of the articulations forming the hock-joint have been constantly occurring; hence this disease has long been a subject of study for the members of the Veterinary profession and others interested in horses. Some apology, therefore, seems necessary for bringing the subject before the readers of the Review. My object in doing so is to correct a popular error, which exists almost universally, with regard to the *seat* of spavin and the parts involved, and, consequently, of the treatment adopted in the efforts directed toward effecting a cure of the disease.

Turn to what author we may, we find them all agreeing with the definition of a spavin given by Professor Williams in his standard work on "The Principles and Practice of Veterinary Surgery," who says, "A bone-spavin may be defined to be an exostosis on the inner and lower part of the hock, arising from inflammation of the cuniform and metatarsal bones terminating generally in anchylosis of one or more of the gliding joints of the hock." Also, "Bone-spavin is but very rarely formed on the outer side of the hock."

In the present paper it is not my intention to enter into the pathological anatomy, causes or symptoms of the diseased condition known by the term spavin. I refer the reader to the excellent work above quoted for information on these subjects. I wish merely to point out a few practical facts regarding the location of the disease and the treatment it suggests.

Like all others for several years after commencing practice, I accepted the popular idea of a bone-spavin being confined to the antero-internal part of the hock-joint, and, consequently, in recommending or applying treatment was satisfied to counter-irritate that part only, either by a seton, the firing-iron, or blister, with, in almost every case, disappointment as to the result. Frequent dissection of diseased hocks soon convinced me that in very few cases, indeed, is the inflammation confined to the antero-internal part of the hock, but extends till not only "one or more," but nearly if not all these articulations are involved in the ossification.

If we take for illustration of the above remarks, fifty-four dried specimens of bone-spavin which I have collected in the museum of this College, we will find the following instructive facts:

Seven specimens in which all the articulations are involved in anchylosis except that between the tibia and astragalus.

One in which all the small bones except the os calcis are involved.

Twenty-eight in which the cuneiforms are united to one another and to the metatarsus.

Fourteen in which the ossification is confined to the articulations between the os calcis and astragalus.

Three (properly called splint) in which the ossification is merely between the internal splint-bone and the cannon.

One where the exostosis is confined to the antero-internal part of the cannon-bone, not involving the splint or cuneiform bones.

Out of the twenty-eight specimens in which anchylosis of the cuneiform bones has taken place, *we only find seven in which the cuboid is not involved in the ossification.* True, the ossification is interosseous, and would not be perceptible on the outside of the hock, even to an acute observer, during life; but that fact does not in any way justify the popular error that "*bone-spavin is but very rarely formed on the outside of the hock.*" In the same specimens we find also two of antero-internal spavin in which the anchylosis is so smooth and bulges so little, that it would be impossible to detect any enlargement during life, yet we find the anchylosis complete, and involving the metatarsus with the three cuneiform and cuboid bones.

If we take these fifty-four specimens as a fair representation of this disease, it will thus be seen that while the inflammation would appear to originate and occur most frequently at the antero-internal part of the hock, it seldom confines itself to that location, but in three fourths of the cases the disease has extended to *the outside of the metatarsus as well.*

Next in importance from the frequency of the occurrence of inflammation leading to ossification, we find the articulations between the os calcis and astragalus furnishing fourteen out of fifty-four (more than one fourth,) exclusive of cases of complete anchylosis of the hock. In examining these specimens we find that, with one or two exceptions, there is no external enlargement which could be diagnosed during life with any degree of certainty, yet we find from the completeness of the anchylosis the inflammatory process must have been active while it lasted. That this is a very common seat of hock lameness a long

experience and frequent dissections have fully demonstrated. Every practitioner, especially in cities, has frequently found a difficulty in satisfactorily locating the seat of lameness behind. Judging by the action of the hock, they have felt convinced that it was the seat of the disease, but the most careful examination of that joint, in the usual seat of spavin, fails to discover any enlargement, and very often they have come to the erroneous conclusion that the hip or stifle must be the seat of the cause of lameness, whereas, the articulations between the os calcis and astragalus in most of the occult hock lamenesses will be found in a diseased condition.

In this form of spavin the lameness does not disappear by exercise to the same extent as in ordinary spavin; in fact, it is often increased by exercise, especially if on uneven ground. In these cases a very good test is to flex the hock, and by grasping the os calcis and moving it on its articulations, it will cause pain and increase the lameness.

A consideration of the position and uses of these two bones, and their connection to one another will readily indicate their liability to injury from over-exertion, slipping, and the usual causes of arthritis. The astragalus being subject to pressure from the tibia acting on its pulley-like surface in a direction from above downward and backward, and as remarked by Professor Williams, the peculiar screw-like motion of the joint is subject to three deviations: "First, the direction is from within outward for a short distance, then it seems to run perpendicularly, and finally the lines of the prominence are seen to curve toward the inner side, and on to the inner third of the cuniform magnum."

This gives rise to action more or less twisting. The astragalus resting upon the cuneiform as its pedestal, is supported behind by the os calcis which clasps it as it were, resting upon it, and being supported by it.

While the astragalus has to sustain sometimes enormous weight and compression, the os calcis is subjected to corresponding tractile force, applied by means of the powerful tendons which are attached to or play over its surface. Although we find it strongly bound in its position by powerful ligaments, we need not be surprised if we find that the articulations between these two bones, being exposed to such antagonistic and often violent forces, frequently sustain such injury as to cause them to become inflamed, and be followed by all the concurrent phenomena of that accident.

A knowledge of the above facts led me many years ago to adopt the plan of applying counter-irritation, not to the antero-internal part

of the hock only, but round the whole articulation, without including the true hock-joint. In young animals three or four months' confinement in a loose box, with frequent applications of an active blister as above; in older ones the firing-iron, followed by blistering—the feet being kept level—have proved successful in a large proportion of cases treated at the College.

The treatment of spavin in old animals, for obvious reasons, should seldom be recommended or undertaken; but even in them by firing and blistering *round the entire articulation*, benefit will often be derived, provided sufficient rest is allowed, and the other conditions necessary are attended to.

RINDERPEST.

ITS PROPAGATION.—No. 2.

[*From the National Live Stock Journal, Chicago, Ill.*]

(*Continued from Page* 165.)

In our first article, attention has been drawn mainly to the dangers of the diffusion of rinderpest through the movement of live animals. In the present, the propagation of the disease by the products of infected animals will especially demand consideration. It may be stated broadly that all fresh products of the diseased are infecting, and that contact with, and proximity to them, are equivalent to contact with and proximity to the sick animal itself. But to obtain a clearer view of the subject we must take up successively the different methods by which these products are capable of infecting.

CARCASSES.

In all veterinary sanitary codes the dangers clustering around the carcass of the infected animal are fully recognized, and the law enacts that in all but very exceptional cases, *the skin shall be deeply gashed by crucial incisions so as to render it valueless, that the body shall be buried in a secluded place to a depth of not less than six feet, and that a thick layer of quicklime shall be laid over it before the grave is filled.* In the case of sick or dead cattle on shipboard, an easy method of disposing of them is sometimes sought by throwing them overboard before reaching port. Such carcasses floating ashore are quite as dangerous as the sick animals

themselves. During the last outbreak in Great Britain (in 1866) the disease was spread on the shores of the Frith of Forth by carcasses thus committed to the waves. A similar instance of the propagation of the disease through the infected bodies thrown into fresh water is mentioned by Buniva; the carcasses were thrown into the *Canal del Rotto*, and, carried on by the current, they infected the stock all along its course. Many facts go to show that the poison is not readily destroyed in water. Bruckmuller records how soldiers washed the infected meat furnished as their rations in a tributary of the Leitha, and that a cow and calf taken to drink from the river below showed symptoms of the disease in eight days, and had to be slaughtered, together with the rest of the horned cattle. He adduces other similar cases, as do also Oppeln and Gerlach.

Separated as we are by the broad Atlantic from all present seats of infection, this may seem to be a subject of small moment to us. Yet it should at least enforce the precaution, that when a ship from an infected country arrives at an American port with one ruminant short of the cargo she started with, not only should the others be carefully examined and quarantined, but the authorities along the shores where there is any danger of such carcass being stranded should be notified to bury it promptly, and disinfect the place where it has lain.

INFECTED MEAT.

The infected flesh, when carried around and sold for human food, has often propagated the disease. Instances of this kind are given by Buniva, Bojanus, Ribes, Hofacker, Renner, Maresch, Bunne, Bruckmuller, Gerlach, Fleming, Bouley, Reynal, &c. As we do not import fresh meat, and have no temptation to allow the flesh of animals arriving infected to be used for human food, this may seem of small moment to us. Yet, there is the remote possibility of ships reaching our shores that have been infected by carrying such meat between different countries in Europe. As an example of how such infection will operate, I need only quote the case of the two gazelles that carried the disease to the *Jardin d'Acclimatation*, Paris, in 1866. These were carried to the steamer in London in a covered wagon that had been used for transporting beef, and to those who investigated the matter, this seemed the only cognizable source of infection. This question of infected ships will be referred to elsewhere.

Closely connected with this subject of infected meat and carcasses, is the influence of dogs, cats, and other carnivorous animals and birds in spreading the malady. Such meat being considered less valuable than

other kinds, is left more accessible to these rapacious animals, and is often carried off by them to be devoured at leisure in the very buildings, yards or parks where cattle and sheep are kept. This should be a strong argument, not only against the use of such meat for human consumption, were any such wanted, but above all in favor of the most careful seclusion and guardianship of the carcasses, and for their early and thorough burial.

FRESH HIDES INFECTING—DRIED HIDES NON-INFECTING.

The question of the possibility of infection by imported hides is one of great and immediate interest to us, inasmuch as our tanners draw largely on the foreign market for their supplies. And here we must compliment the government for pursuing a perfectly safe course in entirely prohibiting the importation of hides from the various infected countries. The order, as we shall see, is unduly stringent, but it is unquestionably better to have inflicted a temporary injury on the leather trade than to have run the risk of a wholesale infection of our flocks and herds.

Of the virulence of fresh hides there can be no more question than of fresh carcasses or of flesh. The blood of the animal is virulent, and as this is contained in all of these products alike, all are infecting when newly removed from the carcass. Again, in rinderpest the skin is usually the seat of a specific eruption in which the poison is to a large extent concentrated. This is universally acknowledged, and it is needless to adduce illustrative instances.

But in the case of hides, much more than carcasses or flesh, there comes up the question of the early destruction of the poison when exposed in thin layers to the action of the air. In addition to the remarks already offered as to the destruction of the virus by exposure, I may here adduce one or two more from Dr. Rawitsch, who was appointed by the Russian government to conduct inoculation experiments.

> On the 20th of June, 1863, Professor Jessen and myself obtained, at Sars Koge-Selo, virus from animals that were very sick; on the 4th of July we arrived at Orenburg and inoculated a number of cattle with this virus, without producing any result. The same cattle were at a later period inoculated with fresh virus and contracted rinderpest. Many such cases occurred. Once we obtained some virus in a village, and inoculated with it a few hours later without producing any result.

To return to the hides. The older observers are not in perfect harmony on this subject. Weith, Lorinzer and Spinola found infection to persist in hides no longer than the eighth day, and Camper until the sixth only. Layard states that rinderpest was imported into England in 1745, in a parcel of distempered hides purchased in Zealand, where

their sale had been interdicted. But considerable doubt is thrown upon this story by the still more circumstantial account of Mr. Theobalds, that it was "brought over from Holland, in April, 1745, by means of the white calves which a farmer at Poplar, near London, sent for in order to mix the breed." On the other hand, Courtrivon and Vicq d'Azyr claim to have covered cows with hides taken from sick animals on the day of their death without conveying the disease. If we can place confidence in this and in the other statement of Vicq d'Azyr, that he had inoculated rinderpest successfully with pieces of skin from a carcass that had been interred three months, it places in a strong light the destructibility of the poison in the free air, and its vitality when air is excluded. But, happily, we are not left to base our decision on any such uncertain results. To the Russian Veterinarians we are indebted for the definite decision of this question as of so many others bearing on rinderpest.

Dr. Rawitsch says:

> Many experiments were made with dried skins and with hides that had been hung up in the open air and exposed during twenty-four hours. *These skins never produced a case of rinderpest. On the same cattle were afterwards placed fresh hides, or they were inoculated with fresh virus, and they died.* I appeal to Professor Jessen, who will confirm my statement. I believe, if we have exact information, that during twelve years not a single case of infection has occurred by means of dried skins.

In the same connection, Dr. Jessen remarks:

> I beg leave to say a few words with regard to the disinfection of skins. . . . I must state that every hide that has been dried at a heat of 40° to 50° Reaumur (122° to 144.5° Fahr.) is incapable of producing infection. . . . Professor Branell has made many attempts at inoculation with dried skins and dried hair; *but whenever they were inoculated after forty-eight hours, in no case was infection the result.* No practical Veterinarian will at present doubt that by means of dry hair as well as dry hides, anthrax may be propogated. I ask them can *one* instance be adduced in which, by means of dry skins, or their export beyond the Russian or any other frontier, the rinderpest has spread. If not one instance can be enumerated, then dried skins ought under all circumstances to be imported free.—(International Veterinary Congress at Vienna.)

It need only be added that this Congress, composed of the most eminent Veterinarians in Europe, sent by their respective governments to discuss the various subjects pertaining to veterinary sanitary police, unanimously agreed to recommend *hard dried hides* as an article of commerce on which no restriction should be placed, when the question was one of the propagation of rinderpest.

It would be easy to amplify such evidence, and to give the details of particular experiments, but I have preferred to give the evidence in the concrete, and to supplement it with the well-considered conclusion

of the combined Veterinary skill of Europe, rather than to extend unnecessarily the limits of this article. I will only add that the same series of experiments established the fact that hides which had been steeped in alkaline solutions (lye), in milk of lime or in boiling water, proved absolutely non-infecting.

If dried hides can be freely admitted into commerce in Europe, and if two days' exposure is destructive to the poison at ordinary temperatures, how much more safely may they be admitted if they have been first dried to prepare them for shipping, and then stowed away for nine or ten days more in crossing the Atlantic. There are only two possible conditions in which imported hides may preserve the virus of rinderpest: 1st, if they are frozen so that their organic constituents may be locked up without change until again thawed out; and 2d, when taken from animals that have died on shipboard during the passage. But hides shipped in a frozen condition would be thawed out in crossing the Gulf Stream, and would arrive soft and wet, so that they would be condemned as failing to meet the requirements, dry and hard; and hides taken from animals dying during the voyage would be equally disqualified, from the fact that the ship failed to present a clean bill of health for the trip.

On the whole, then, the interests of the leather trade may be safely consulted so far as to allow the importation of hides that are perfectly *dried and hard*, while all *fresh*, *soft or wet hides* should still be excluded.

DRIED HORNS, HOOFS AND BONES.

Like all other fresh products of the animal, these are infecting when newly removed from the sick, but in the *dried* condition they are equally harmless with dried hides, and are, therefore, legitimate objects of international commerce.

FAT.

This, as found in commerce, having been melted and poured into casks or bladders, is harmless, by reason of the high temperature to which it has been subjected, and may, therefore, be left out of account. If, however, unmelted fat were an article of import with us as it is in various countries of Europe, it would prove equally dangerous with fresh meat, and ought, therefore, to be absolutely interdicted.

WOOL, HAIR, BRISTLES.

Wool, like hides, interests us directly, as we fail to produce enough for our own consumption, and import largely from abroad. Theoreti-

cally, wool is a suitable medium for the importation of rinderpest, sheep as well as cattle being subject to the disease. Yet a careful study of the history of the malady fails to furnish illustrative instances of infection by this channel. There can be no doubt that the virus may be imprisoned in the meshes of the firmly-rolled fleece, and conveyed to a certain distance unchanged, precisely as it has often been in the clothes of human beings. But as the virus impregnating the clothes is destroyed by a few hours' exposure, (see in No. 1, case of attendant on sick and healthy animals at the Albert Veterinary College), so it probably is in the loose texture of the fleece. Yet if wool be packed at once after having been shorn, there can be no doubt that the virus might be excluded from the air as completely as in fodder. and thus be conveyed to any distance. It is,therefore, a wise provision of most of the European veterinary sanitary codes that forbids the importation of unwashed wool from infected countries, and a similar enactment would be equally appropriate for us. Washed wool has undergone such a process of purification and airing that it may be held clear of suspicion, and admitted without any restriction. On this point, again, our Treasury order illustrates the absurdity of our system, as not a word is said about wool in any shape. Hair and bristles are to be treated exactly like wool ; when quite new they may be virulent, but when quite dry they have always proved harmless.

EXCREMENT.

All who have investigated the subject of rinderpest have been struck with the important place held by excrement in its propagation. As the disease concentrates its morbid action on the stomach and bowels, their products are especially charged with the poison ; and if brought in contact with other animals in their fresh condition, or after having been closely packed in a mass, they will communicate the disease with the greatest certainty. Hence the history of the malady is full of instances of infection from recently manured fields, from those on which the manure has been spread but frozen for weeks and months, from grazing on fields formerly occupied by diseased animals, and from occupying buildings, yards, loading banks, wagons, cars, ships and boats in which the sick have been. The manure is usually deposited in masses, thick enough to prevent the ready destruction of the virus by the action of the air, and hence its virulence is only extinguished by the slow process of putrefaction. Whatever, therefore, retards this process, will prolong this danger; and thus the frosts of winter, and the firm packing of the

manure, will each favor the retention of the contagion. Practically, this imports little to us, as on shipboard manure is disposed of daily in the easiest manner, by turning it into the ocean; yet it should render imperative a very thorough cleansing and disinfection of ships in which any diseased animals may have arrived.

FODDER.

Fodder is of more practical importance, as being liable to be landed in variable quantity, along with stock brought to the country, and as capable of retaining and transmitting the poison, though the animals with which it was imported may not be susceptible to its influence. Thus, horses and swine, though themselves incapable of taking the disease, and cattle and sheep that are not susceptible to it, by reason of a special idiosyncrasy, or a former attack, may become the occasion of landing one or more bales of hay or straw which has been infected in the country of export, and has preserved the poison by reason of the closeness of the packing and the exclusion of air.

Many examples of infection by hay are recorded. Buniva, Hurtrel d'Arboval, Huzard, Grognier, Reynal, etc., adduce instances of its conveyance by the left hay of the commissary herds of the armies in the field—such herds being almost always infected in Europe. Vicq d'Azyr rubbed down a sick animal with wisps of hay, and then fed them to a healthy one, thereby conveying rinderpest; a second animal, which ate a portion of this hay, after it had been washed and cleaned, escaped. Haubner records an instance in which hay communicated rinderpest four months after it had been taken from an infected barn. In 1770, the disease was imported into Banff, Scotland, in hay imported from Holland, where the malady then prevailed. It should, therefore, be made imperative that no hay nor straw coming from an infected country should be landed, but rather burnt in the furnaces of the vessel, or on the quays.

BLANKETS, BUCKETS, BRUSHES AND OTHER STABLE UTENSILS.

There is comparatively little danger of these harboring the poison in cases in which imported stock have shown a perfect immunity from disease. But in cases in which their record is not altogether clear, or where blankets have been closely packed in chests or trunks, and thus shut out from the disinfecting action of the air, they ought to be subjected to a purification before landing. Blankets may be boiled, hung up, unfolded over thick fumes of burning sulphur, or heated up to a

temperature of 200° Fahr., for half an hour, in an oven. Brushes, buckets, forks, and other utensils, may be thoroughly washed with soap suds, or all, excepting the brushes, may be sponged with a strong solution of caustic soda; or the carbolic acid, or chloride of lime solution, used for the surface of the animals, may be freely applied to these also.

SHIPS.

These, like all other means of conveyance, should be thoroughly disinfected, where there is the ground of suspicion that they have carried animals suffering from rinderpest. In Europe, in time past, railroad cars and ships have been among the most prolific sources of this affection. Cattle from healthy localities, transported in uncleaned wagons, were seized with the disease a day or two after reaching their destination; and this was so constantly repeated that a general system of disinfection has been adopted for all articles used in cattle traffic. With vessels engaged in the transatlantic trade, no such universal system is necessary. Infected ships, carrying cattle, would contaminate them so that the disease would be developed in mid-ocean, and would be only too evident on their arrival. The disinfection of ships, therefore, may be safely confined to such as have lost animals, presumably from disease in transit, and to such as arrive with sick animals on board. Ships that have been employed, at no distant date, in carrying animals, fresh meat, hides, unmelted fat, or other fresh animal products, or hay or straw from an infected country, would be in equal need of disinfection, before they were again used for the conveyance of ruminants; but unless they were to be employed for our internal trade, their disinfection would not come under our present subject—the preservation of home stock.*

* In the last article on this subject, when mentioning the importation of the lung plague by means of a Short-horn cow, Austria should have been printed Australia.

TWO CASES OF URETHRAL CALCULUS.—URETHROTOMY.

By E. Mink, Rochester, N. Y.

In April, 1875, I was called to attend a bay gelding about ten years of age, owned by a gentleman residing near Churchville, N. Y. I was informed by the owner that a practitioner, who had been attending the patient concluded his ailment to be inflammation of the kidneys. In any event they were sure there was some trouble about the water works.

I started to attend the patient with the expectation of finding some bowel difficulty. He had been observed for some days previous to pass water frequently and in small quantities. He had suffered great pain for about twenty-four hours. When I arrived at his stall I found him lying down, and he could be induced to rise only with the use of a whip.

In rising and standing he manifested symptoms of considerable exhaustion. His pulse and general appearance indicated that he could not have endured his sufferings for many more hours without sinking under them. An examination at the ischiatic notch showed the urethra much distended. I immediately passed a catheter. When it had reached the perineal region, it met with an obstruction which I was at once satisfied was urethral calculus. The patient was placed under restraint with a twitch and side line. The catheter was, by an assistant, firmly pressed against the obstruction. I then cut down upon and removed it. The catheter was then passed on into the bladder, and about twelve quarts of urine came away.

Relief was instantaneous. The only further treatment advised was proper diet, a daily cleaning of the wound, and dressing with a weak lotion of carbolic acid. The wound healed rapidly and kindly, and the patient resumed work within a few days.

The second case was in an ox—one of a pair weighing 1800 pounds—owned by P. J. Thomas, Esq., of Rose, Wayne Co., about fifty miles distant from this city. Was called to attend him on the 8th of February last. Was informed that he had been sick for about twenty days.

In the opinion of the wise doctors of the neighborhood, his malady was horn ail, or tail soak, or both; and, accordingly, his horns had been bored, stimulating liquids thrown into the cavities of them; his

tail split open with a knife, the wounds filled with salt, and then bound up with tarred rags.

I was told that they had not observed him to pass any water for several days. A glance at the suffering animal revealed to me an enormously distended abdomen.

The peculiar, hollow appearance in the superior portion of both iliac regions, with the abrupt lateral distension of the abdomen, indicated to me that I had a case of ascites to deal with.

Percussion and palpitation confirmed my diagnosis. I examined the urethra in the perineal region, and found that it was not distended with urine. This led me to remark that if he had urethral obstruction, the probability was that his bladder was ruptured.

The animal was led from his stall into a barnyard supplied with a good bed of dry straw. I then made an opening, with a lancet, in the skin, in the inferior abdominal region, about three inches from the linea alba. Through this opening I pushed a trocar. After withdrawing the stillette the fluid came through the canula with great force. The first impression on my olfactories was that it had a urinous smell.

The water was allowed to flow until about forty-five gallons had been drawn. The ox manifested symptoms of syncope; a bandage was gradually tightened around him, but he slowly sank to the ground. I then secured him for an operation, and administered a drench of milk and whiskey punch.

I commenced by cutting down just in front of the scrotum, to and through the sheath of the penis. I then seized the penis with a pair of clamps that were lined with vulcanized rubber on their opposing surfaces, and steadily pulled upon the penis until the retractor muscles were overcome, and the sigmoid flexures were straightened.

I then passed a fine whalebone staff into the urethra until it met with an obstruction in one of the sigmoid flexures. This I cut down upon and removed. It proved to be a genuine calculus about the size of an ordinary marrowfat pea, though irregularly spherical, which had completely filled and obstructed the passage.

The penis was then returned to its sheath, the incision in the skin sutured, and the ox allowed to rise, which he did quite well. The milk and whiskey punch was repeated, and an hour of rest and quiet allowed, when the trocar was again pushed into the abdominal cavity, and the fluid allowed to run until fifteen gallons more were removed, making sixty gallons in all.

I requested that an autopsy should be made in the event of his

death, which I was sure was not far off, to ascertain if the bladder was ruptured.

He died within a week. The *post mortem* revealed a ruptured bladder. There were many spectators present during my operations, and when I had got through and had entered the hotel of the place, to which I was followed by the crowd, I gave them a brief lecture on the folly of diagnosing nearly every obscure case of sickness in cattle as either horn ail or tail ail. The doctors who had attended the ox were present, took the lecture kindly, and admitted that the patient might have been saved by a timely removal of the calculus.

This case is an admonition to the owners of stock that *at least one* competent Veterinary Surgeon should occupy a radius of ten miles within every thickly settled agricultural district throughout our land, so that our poor brutes would no longer be subject to the useless and cruel barbarities that are practiced upon them by ignorant and conceited practitioners.

ROCHESTER, Sept. 13, 1877.

P. S.—I omitted to mention that the calculus removed from the horse was about the size of an ordinary hickory nut.—E. M.

OBSTRUCTION OF THE URETHRA.

On the 16th ult. I was called to see one of a pair of coach horses, the property of George W. Lyman, Esq. The coachman said that the animal had trouble in passing urine, and that there was a swelling on the end of the penis. On examination, I found the terminal end of the urethra projecting beyond the glans penis nearly an inch, and the canal obstructed; with the nail of the small finger I was able to feel a hard substance, which I presumed to be a calculus, firmly impacted; as the animal was of a nervous temperament, and irritable, I was satisfied that it could not be removed unless he was thrown down and secured; as it was nearly dark, the operation was postponed until the next day. On the 17th he was cast; after drawing out the penis, I attempted, with forceps, to remove the mass entire, but was not able to do it; I then introduced one blade of the forceps between the mucous membrane of the urethra and the calculus; then, with the thumb for the fulcrum, the handle of the forceps for a lever, a small piece was broken off, which

was removed by the forceps; in the same manner the remainder was taken away; the animal was let up, and in a few minutes passed the urine without difficulty. A part of calculus was lost, as it crumbled between the blades of the forceps; the weight of the remainder was thirty-five grains.

Calculi in the urinary organs may not be rare in other localities, it certainly is in this, as this is the third case which has come under my observation in a practice extending over a period of more than thirty years.

E. F. THAYER.

EDITORIAL.

PROFESSOR GERLACH.—VETERINARY EDUCATION.

The Veterinary profession has just lost one of its best lights, one of the greatest reformers in the general Veterinary education, Professor Gerlach, the able Director of the Veterinary School of Berlin, Prussia, died on the 29th of August last.

Since the days of Renault, of Alfort, there never was a man whose whole life has been devoted to the improvement and advancement of both the Veterinary Profession and the education of those desirous to enter on its studies; and though but few of our readers knew of him, his world-wide reputation was such as a teacher, a writer and an investigator that all Veterinarians, even on this side of the Atlantic, will appeciate the loss Veterinary art has sustained in the death of such an eminent man.

Through the kindness of one of our correspondents, a student and more than a friend of his, we are able to present our readers with an obituary of Professor Gerlach, and we do it as the leading paper of a series of articles on Veterinary Education which was the subject of much attention on the part of the deceased director, and to which these articles we might consider as being dedicated to his memory.

The subject of Veterinary Education abroad and on this continent has occupied the minds of many engaged in the duties of teaching at the different schools. The first numbers of the REVIEW contain articles from the pen of Professor McEachran; those which we have received from Mr. Billings, which we will publish at some future time, will, no doubt, be found interesting, and though there are in them many points which we fear would be of difficult, but not impossible realization, we must say that the good object they have in view will

be an excuse for what at first sight would appear to be too extravagant. It may be looked on by many as the suggestions of an enthusiastic mind, but we cannot help but consider them as excellent to prepare our people to the appreciation of the requirements for the qualifications of the Veterinarians of the future.

MEETING OF THE U. S. V. M. ASSOCIATION.

The 14th anniversary meeting of the United States Veterinary Medical Association was held a few days ago, and a concise report of the transactions are found in the contents of this number of the REVIEW.

Taking in consideration the fair attendance of the members present, and the good representation of the different States in the country which met together on that occasion, and the friendly feelings which prevailed through the meeting, and later in the day at the entertainment which followed, this 14th anniversary was as much a success as the one which was held last year in Philadelphia. But if, by thought we go back to that occasion, how much more interesting, and how more satisfactory, in a scientific point of view, it will prove to have been. Then the attendance was also quite large, but the meeting was specially brilliant by the number of original subjects, by the scientific papers which were read, and for the reading of which nearly two whole days were required. In this last meeting, on the contrary, we had nothing. Not a single report, not the shortest paper. Still members were there collected, some from a long distance from New York, and had to separate after listening to a series of common business which, generally speaking, could have been transacted in a few minutes, and that by an Executive Committee or the Comitia Minora.

Now it seems to us that such a state of affairs is to be much regretted, and that something more than general business of a large society like the United States Veterinary Medical Association ought to be carried on at a yearly or anniversary meeting. There is, besides the ordinary committees, three special ones formed in the Association from which sufficient material for reading purposes ought to be provided—the Committee on Diseases whose duties are to investigate, as well as in their power, the general condition of health of live stock all over the country, and the diseases, with causes, symptoms, pathological lesions, etc.; again we have a Committee on Education whose investigations in the improved state of Veterinary education, of recent works and publications, would give them material for excellent reports; and last, but

not least, there is a Committee on Prizes. Is it not a sad thing to find that in this last meeting the three chairmen of these different committees had no report to make. It shows, it appears to us, a lack of ambition on the part of the members which is to be regretted, and which if not overcome will in a short time prove a dangerous condition for the future welfare of the Association. A meeting cannot be made interesting and worthy of a long journey unless something besides general business is to reward the fatigues of members who come to New York from the far East or the remote West, from Boston or from Cincinnati; and unless the special efforts of the officers of the Association can wake up the spirit of labor amongst the members, we fear the United States Veterinary Medical Association will never see again a meeting like the one held in 1876, and that, though its members may increase, the good that it might do towards the interests of the profession will be of little use.

REGULAR GRADUATES.

According to our request made in the last number of the REVIEW, we have received from Professor A. Smith, of Toronto, a list of the graduates of the Toronto School, and extracted from it for publication the names of the gentlemen which are practicing in the United States.

From the pen of Professor Prentice, of the Illinois University, we have received a communication with an official list of the regular members of the profession members of the Royal College of Veterinary Surgeons. This list contains only those who have a full claim to the title M. R. C. V. S., and, of course, does not mention those gentlemen who, holding degrees from Edinburgh or Glasgow only, though regular graduates, are V. S. E. or V. S. G., and not M. R. C. V. S. E. or G. as many have the habit of calling themselves. There is but one Royal College of Veterinary Surgeons, and no one has the right to use its name unless he holds the diploma of that scientific body of Great Britain. We will try to obtain for our next, a complete list of the graduates of the other schools of that country, and present it to our readers.

FOURTEENTH ANNUAL MEETING OF THE UNITED VETERINARY MEDICAL ASSOCIATION.

The Fourteenth Annual Meeting of this Association took place in the lecture room of the American Veterinary College on Tuesday, September 18th, 1877. The Comitia Minora met at 11 A. M. and adjourned at 12 M., when the regular session of the Association was called to order with President Liautard in the chair. O. H. Flagg, New Bed-

ford, Mass.; J. H. Stickney, Boston, Mass.; E. F. Thayer, West Newton, Mass.; Robert J. Saunders, Salem, Mass.; John S. Saunders, Boston, Mass.; Theo. S. Very, Boston, Mass.; Chas. P. Lyman, Springfield, Mass.; Robert Laidlaw, Albany, N. Y.; C. B. Michener, Carversville, Pa.; John B. Cosgrove, Worcester, Mass.; E. Travers, Rhinebeck, N. Y.; J. C. Corlies, Newark, N. J.; H. H. Lawrence, Yonkers, N. Y.; L. V. Plageman, Brooklyn, N. Y.; Jas. L. Robertson, A. Lockhart, C. Burden, P. Nostrand, J. D. Hopkins, and A. A. Holcombe, of New York City, answered to roll call.

The minutes of the previous meeting were read and accepted. The committee appointed to petition Congress for a more stringent law relating to the importation of cattle reported progress. The Board of Censors reported favorably upon the applications for membership of John Myers, Cincinnati, Ohio; Chas. H. Hall, New Bedford, Mass.; C. H. Peabody, Providence, R. I.; Geo. P. Penniman, Worcester, Mass.; and W. J. Coates, New York City. Upon motion they were all elected members of the Association. Chas. P. Lyman, of Springfield, Mass., presented the application of J. A. Brackin, Pittsfield, Mass.; and J. C. Corlies, of Newark, N. J., presented application of Julius C. Force, of Newark, N. J., for membership. Upon motion the chair appointed A. Lockhart, J. D. Hopkins, and J. B. Cosgrove, a Committee on Nomination for Officers. The committee reported for President, Chas. P. Lyman, Springfield, Mass.; Vice-President, Williamson Bryden, Boston, Mass.; Recording Secretary, A. A. Holcombe, New York; Corresponding Secretary, Earnest Travers, Rhinebeck, N. Y.; Treasurer, C. Burden, N. Y.; Censors, J. H. Stickney, M. D., Boston, Mass.; J. L. Robertson, M. D. V. S., N. Y.; J. D. Hopkins, N. Y.; Alexander Lockhart, N. Y.; A. Liautard, M. D. V. S., N. Y.; A. A. Holcombe, N. Y. The nominees presented by the committee were elected by acclamation. Upon motion the President appointed A. Lockhart a committee of one to conduct the newly elected President to the chair. Retiring President Liautard addressed the Association, thanking them for the honor they had conferred upon him by electing him two years in succession as their presiding officer. He called their attention to the progress which Veterinary medicine and surgery had made during that time, and said he believed the birth of the AMERICAN VETERINARY REVIEW was the most important of them all. That it was born to the Association upon the year of the hundredth anniversary of the birth of the nation, and that although it was strong in its infancy, and is receiving favorable notice at the hands of English, French, and German Veterinarians to

make it a truly representative organ of American Veterinary literature that would carry to the world a just and comprehensible condition of the advancement of the science as it exists here to-day, requires the constant and unceasing efforts of all the members of this Association.

C. P. Lyman then thanked the Association for the unexpected honor which it had bestowed upon him in electing him as their presiding officer, and while he should do all in his power to advance the interests of Veterinary surgery, he could do little without the aid of the members of this Association, which he felt sure would be cordially given him. Communications from Benj. McInnes, of Charleston, South Carolina, and L. T. Bell, of Brooklyn, were received regretting their inability to be present at this meeting. The Secretary was instructed to have two hundred copies of the by-laws of the Association printed. The Committee on Finance reported that inasmuch as the funds of the Association were somewhat depleted, an assessment of five dollars per member be made to meet contingent expenses; such assessment to be paid before March, 1878. Carried.

Dr. Thayer, of West Newton, Mass., presented the first and second vertebræ of a horse which had died from a tumor upon the right side of the neck; the bones showing absorption of a considerable portion of their substance. Dr. Liautard presented the os pedis and nerves from a leg on which neurotomy had been performed. The os pedis was fractured transversely at the semilunar arch, while the nerves presented neuromatic tumors. In connection with this case he reported another case in which similar complication had taken place five days after the operation, in which, the animal being destroyed, the same lesions were found. A third case presented the same symptoms after being operated but a few days. As these three animals had been allowed much liberty almost immediately after the operation, Dr. Liautard inquired if that was not the predisposing cause of the appearance of the complications. Dr. Stickney stated that he did not think they were, as it has been his custom for years to allow neurotomized animals to be turned out to pasture immediately after the operation, and he never had occasion to meet with the same trouble. Dr. Robertson presented several calculi.

After considerable discussion upon the subject of naviculararthritis and the operation of neurotomy, the meeting adjourned to dinner at the Ashland House at 6 P.M.

A. A. HOLCOMBE, *Secretary.*

OBITUARY.

IN MEMORIUM

OF

ANDREAS CHRISTIAN GERLACH.

Late Director of the Royal Veterinary Institute, Berlin, Prussia.

Born in 1811, in Saarstadt, in the Horz Mountains. Died at Berlin, August 29, 1877, aged 66 years.

BY A STUDENT.

"And I hear the voice of coming generations, saying, 'Well done, good and faithful one, you were indeed our Standard Bearer of Truth.'"

It is not my purpose to write even a notice of the life of our late Director; for that task others of his countrymen are far better fitted, and it will undoubtedly be done. For me comes the more difficult task, to describe the friend, and still not overdo the work of judging the man. It is of Gerlach as director, as scientist, as man, I would say a few words, because I believe they may be of benefit to many a student now working his way upwards.

A few words of his life will, however, be a fitting introduction. Born in 1811, we find him graduating from the Berlin school in 1833 as a Veterinarian. He took up the profession from his intense love of animals, a passion which only ceased with his life, and which his dumb friends often returned to the best of their ability. From 1833 to 1844 he practiced privately in and around Hallustadt, in Saxony, being in the last year appointed as Official Veterinarian of that district. In 1847 we find him as assistant, and then as teacher, at the Berlin School. In 1859 he received the honorable appointment as Director of the Royal School at Hanover, and between this time and 1870 were made the greater part of his original researches, which have gained acceptation not only in veterinary but human medicine. Gerlach was the first to deny the abiogenesis of glanders, and the truth of his assertions are being daily more confirmed. To him is also owing the excitement and investigation into the infectious nature of the disease called tuberculosis, in cows; and to the obstinacy with which he defended his views is owing much of the opposition he received from many members of his profession. As the case now looks, Gerlach's position becomes each year more strongly

supported, and that of his opponents weaker. In 1870 he was called to the Directorship of the Royal School at Berlin, and here began his master work, or rather, he had a better opportunity to seek to develop the ideal of his life, viz.: the introduction of a scientific methodic into Veterinary education. In this work he had too much to overcome to be but partially successful, and consequently, the late Director of our school is not alone to be judged by his works, but also by the works which he would have done, viz.: by his ideality. Neither the Berlin school alone, nor the profession in Germany, are alone the losers by the death of this exclusive scientist. The Veterinary profession of the world has, in the writer's opinion, lost its *Standard Bearer;* the leader of its *Forlorn Hope.* Bourgelat was indeed the one to lay the foundation of Veterinary education; and Gerlach was no less the first to make a scientific study of the needs of Veterinary education—narrowing his entire energies to this one point—and the introduction of a scientific methodic into our teaching and practice. Our late Director was indeed the Luther in the school of Veterinary thought. In some respects he had the appearance of a very one-sided man; but to those who knew him better, he was a man bending everything, sacrificing everything, for the success of an ideal object. That object was the elevation of Veterinary medicine to a science, fitted to take its place in the bright halo of the sister sciences of the world. For this he gave his life; for this he mortgaged himself for years; bearing with quiet dignity ill appreciation, and bitter opposition from the persons he was giving his life to serve. To others, there may have been but one Gerlach, and that the autocratic Director of the School; the man who would neither hear nor bear a word of contradiction. To others, and among them the writer, there was another Gerlach; the sincere friend, who greeted me with all the kindness of a father on my arrival in a foreign land, and whose watchfulness, deep interest, and encouraging words of advice, as well as caution, for the past two years, are only to be compared to the tender care of a mother. The autocrat has been, at the same time, the dearest friend of my life.

The entire character of the man might be written in one sentence: "Be sure you are right, then go ahead, regardless of cost." That he did this, every one will testify. He was a hard and exact student of his position and responsibilities; knew exactly the worth and ability of each of his assistants; and knew much better than any other leader in our profession—judging by their writings—the course which can alone succeed in the elevation of our profession. He was frequently accused of want of generosity towards the opinions of others. Persons who in

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It is not my purpose to write even a notice of the life of our late Director; for that task others of his countrymen are far better fitted, and it will undoubtedly be done. For me comes the more difficult task, to describe the friend, and still not overdo the work of judging the man. It is of Gerlach as director, as scientist, as man, I would say a few words, because I believe they may be of benefit to many a student now working his way upwards.

A few words of his life will, however, be a fitting introduction. Born in 1811, we find him graduating from the Berlin school in 1833 as a Veterinarian. He took up the profession from his intense love of animals, a passion which only ceased with his life, and which his dumb friends often returned to the best of their ability. From 1833 to 1844 he practiced privately in and around Hallustadt, in Saxony, being in the last year appointed as Official Veterinarian of that district. In 1847 we find him as assistant, and then as teacher, at the Berlin School. In 1859 he received the honorable appointment as Director of the Royal School at Hanover, and between this time and 1870 were made the greater part of his original researches, which have gained acceptation not only in veterinary but human medicine. Gerlach was the first to deny the abiogenesis of glanders, and the truth of his assertions are being daily more confirmed. To him is also owing the excitement and investigation into the infectious nature of the disease called tuberculosis, in cows; and to the obstinacy with which he defended his views is owing much of the opposition he received from many members of his profession. As the case now looks, Gerlach's position becomes each year more strongly

supported, and that of his opponents weaker. In 1870 he was called to the Directorship of the Royal School at Berlin, and here began his master work, or rather, he had a better opportunity to seek to develop the ideal of his life, viz.: the introduction of a scientific methodic into Veterinary education. In this work he had too much to overcome to be but partially successful, and consequently, the late Director of our school is not alone to be judged by his works, but also by the works which he would have done, viz.: by his ideality. Neither the Berlin school alone, nor the profession in Germany, are alone the losers by the death of this exclusive scientist. The Veterinary profession of the world has, in the writer's opinion, lost its *Standard Bearer;* the leader of its *Forlorn Hope.* Bourgelat was indeed the one to lay the foundation of Veterinary education; and Gerlach was no less the first to make a scientific study of the needs of Veterinary education—narrowing his entire energies to this one point—and the introduction of a scientific methodic into our teaching and practice. Our late Director was indeed the Luther in the school of Veterinary thought. In some respects he had the appearance of a very one-sided man; but to those who knew him better, he was a man bending everything, sacrificing everything, for the success of an ideal object. That object was the elevation of Veterinary medicine to a science, fitted to take its place in the bright halo of the sister sciences of the world. For this he gave his life; for this he mortgaged himself for years; bearing with quiet dignity ill appreciation, and bitter opposition from the persons he was giving his life to serve. To others, there may have been but one Gerlach, and that the autocratic Director of the School; the man who would neither hear nor bear a word of contradiction. To others, and among them the writer, there was another Gerlach; the sincere friend, who greeted me with all the kindness of a father on my arrival in a foreign land, and whose watchfulness, deep interest, and encouraging words of advice, as well as caution, for the past two years, are only to be compared to the tender care of a mother. The autocrat has been, at the same time, the dearest friend of my life.

The entire character of the man might be written in one sentence: "Be sure you are right, then go ahead, regardless of cost." That he did this, every one will testify. He was a hard and exact student of his position and responsibilities; knew exactly the worth and ability of each of his assistants; and knew much better than any other leader in our profession—judging by their writings—the course which can alone succeed in the elevation of our profession. He was frequently accused of want of generosity towards the opinions of others. Persons who in

general make such accusations have very little knowledge of how the world has been made. Generosity towards the opinions of others is a virtue in the general relations of society; but under some circumstances, if continued or indulged in, becomes a weakness. Such a place is the one filled by our late Director.

In judging of Gerlach's character, the writer is not considering him in the narrow limits as Director of a school, but as the ideal man, the true Gerlach, the standard bearer of our profession. Another may with honor fill his place as Director, but this place of greater honor is the world property, and open to the world. Gerlach was, as said, looked upon as unjust, as ignoring the opinions of others. Those saying this, little understood the true nature of the man of whom they were speaking. Nothing ever came from Gerlach without mature reflection; nothing was ever done by him which was not intended for the elevation of our unfortunate practice into a science. Every man selected by him for any position as teacher in the school, was the best known to him. To say that he did not make mistakes, would be giving him a character above mortals. That he did not endeavor to do not only his duty, but his ideal duty, would be false. This apparently cold man was the most enthusiastic, yet practical, idealist, the writer has known. His course was only determined after the most careful consideration of all sides. He did consult, but with those to whom he was himself responsible; not with those it was his duty to direct. Everything was by him judged by his ideal-light; to this perfection he would attain; to this end all must be sacrificed. Great practitioner that he is said to have been, he knew full well that this much lauded practical education was, and is, the *curse*, the carcinoma, consuming our vitality to-day. He did not neglect the practical side, but he would force it where it belongs, where it must be sent before we can advance to a science, that is, as a worthy and necessary assistant to mankind. Science is not practice alone, but this much lauded practical education is of itself little better than educated quackery. Knowing this, knowing the right, strong in the self-consciousness of right and his own ability, Gerlach went onward entirely regardless of men. Many and many a time, in speaking with the writer over his life's work, would he say: "My friend, would we could consult more with those we would work with, but it cannot be; as you go on with your work you will find, this one would modify that, and another this part of your plan, and the end would be, nothing of value would be done." Study, think, weigh all things, and as said before, "be sure you are right, then go ahead." Was Gerlach alone in thus reading the art of human

progress? Emphatically no! The great luminary of human medicine, and the great leader of humanity in Germany, Virchow, as well as other men of the same kind, living and passed away, have all found this to be the sole pathway to success. So it will be to eternity; the great must walk alone. Gerlach was no exception to this rule, and so it will be with the one who would take his place as Leader of our Forlorn Hope. All are willing to concede to his great work in contributing to the better appreciation of the profession in his native land. And the day will surely come when the judgment the writer gives to-day will also be justified. Gerlach sacrificed all thought of himself; Veterinary science was his idol, and like the Hindoo enthusiast, who allows himself to be crushed by the wheels of his advancing God, so was Gerlach crushed, and so he sacrificed himself for our cause. Fellow students in Germany, let us make our late Director our study, educate yourselves broadly; but when our time comes, when we, too, must select the point upon which we will work for our professional advancement, we too, like him, must concentrate all our energies, and hold them well in hand for this one work; like him we must consider no sacrifice too great, no work too hard. We have before us a sacred duty, I as foreigner, you still more as his countrymen, all of us men, and Veterinarians, to see that the Tree of Science, which he planted, and which he gave his life to nourish, does not suffer for want of support. The best monument we can build to his memory is to do our part to the completion of his work, and our work too. Let us see which one of us can fill the place, its impossible for your country yet to fill. Boldly in the conflict lists of the world, your friend and colleague throws this gauntlet at your feet. Who will be the first to take up and unfurl our banner, and lead our advance to new scientific conquests? The question of education is the one demanding the most careful application of scientific methods. It was Gerlach's hope to have lived long enough to bring the entire system of the Berlin school into the hands of specialists. It was Gerlach, more than any one man, who believed in the centralization of Veterinary education for his country at one well appointed institution. A few months before his death, he laid before the writer his ideal plan for the future, telling him of the many hindrances in his way, the greatest of which was want of funds; even then he hoped against hope to bring it about. Unknown, I think, to his colleagues was the fact, that he nourished a secret dislike against the present plan of having our special pathology taught by one or two men. "Divide your work; no time to study, no time to study," he would again and again repeat, and warn me against falling into this

mistake in America. "No progress so," was frequently upon his lips in our many conversations. We may never cease to be grateful for his last work, the introduction of a specialist as a physiologist to our school, and the preparing of the same with a laboratory, instruments, vivisection building, and everything possible, so far as his means would allow. From the professor we have a right to expect much work of immense value, as soon as all comes in working condition. This was the beginning; the ending is the sacred work of other hands. In his seven years' service, the expenses of the school have become doubled, and the institution, from a very inferior position, taken the first rank in Europe. His printed works bear the character of the man; one and all, they can be termed "*Contributions to Science*," for they are as valuable to the human as Veterinary profession. Those having volume form are, "Krätze u Raude," (Scabies,) "Allgemeine Therapie," (General Therapy,) "Gerichtliche Thierheilkunde," (Veterinary Jurisprudence,) and "Du Fleishkost des Menschen," (The Flesh we Eat.) Search where you will among his writings, you find nothing but the exclusive scientist. The name of Gerlach can never be associated with the production of those curses to our profession, *popular works on the diseases of our domestic animals*. This apparently cold man was too deep and tender in his nature to contribute thus to the torturing of the animals he loved, by half educated quackery. His hatred of quackery was glorious—he would have made it imprisonment for life had he had the power. They were as brutes, torturing the truest friends he ever had, our dumb animals.

He leaves two sons, with their wives, to mourn his loss. How good a father he was, the writer well knows; what interest he took in the work of the student who would study, all can testify. Let us one and all take up the work still so uncompleted, and do equally well our part towards its completion.

Königliche Thierarznei Schule, Berlin, Aug. 29, 1877.

CORRESPONDENCE.

VETERINARY COLLEGE, TORONTO, CAN., August 15, 1877.

EDITOR VETERINARY REVIEW:

SIR: In your August number I notice a short article headed "Veterinary Education," and asking me to explain how Mr. Stalker, of Iowa, became a graduate of the Ontario Veterinary College. I thought that Mr. Stalker in reply to the disinterested (?) effusions of the principal of a rival institution, had sufficiently explained his connection with both the American and Ontario Colleges. I agree with L. L. that Mr. S. is a gentleman and a scholar, and, further, I consider him thoroughly competent for and entitled to the position which he occupies.

Mr. S. not only attended a course at two colleges, but for years previous to entering college had given the subject of Veterinary medicine and its collateral branches considerable study.

Until this year I was under an impression that a student had only to attend two sessions at the American Veterinary College to qualify for graduation.

In our College it is necessary to attend two sessions, without a student has attended a course in a recognized Veterinary institution. Many of our students, however, attend three sessions before undergoing a final examination, and merit and ability form the only "*royal road to graduation.*"

We have frequently young men coming here who have been studying with qualified practitioners for two or three years. Such a class of students can in two years pass as good an examination, perhaps, as young men who have not given the subject any study previous to entering college can do in three years. As well as attending to two or three sessions, the most of our students pass the summer months under a qualified practitioner. I believe that a student after attending one or two sessions at college will reap a greater advantage by practicing a few months with a practitioner doing an ordinary practice, than by a six weeks' course at any college.

This year if we had had sixty junior students in place of thirty, they could have been all placed during the summer months with practitioners doing large and paying practices.

L. L. asks, "Is there a royal road to graduation in which either brains or money can pass?" All the money required is fifty dollars per session for two sessions, and only twenty-five if a student desires or requires to attend a third; but it is positively necessary that a candidate for graduation should possess the *other essential* in an eminent degree. For the further information of L. L. I may state the fact that if a gentleman possesses brains and a diploma from the Ontario Veterinary College he can very soon command both *position* and *money*.

Mr. Editor, I heartily endorse the liberal views with which you favor your readers in your editorial on the Veterinary profession in America. I believe far better results will arise from pursuing such a course as you so ably advocate, than by writing disparagingly of many highly respected practitioners who through force of circumstances have not had an opportunity of becoming members of the profession.

I am, sir, yours,

ANDREW SMITH,
Principal Toronto Veterinary College.

OTTAWA, ONT., Sept. 15, 1877.

TO THE EDITOR OF THE AMERICAN VETERINARY REVIEW:

DEAR SIR: I crave a small place in your valuable journal to set right a remark made by Mr. McEachran some few numbers back where, in his paper on Veterinary Education, he says that a former student of the Ontario Veterinary College who acted as an examiner at the spring examination of that institution, remarked to him that the examination made him (the examiner) blush for the low standard that he himself was graduated on. Reading this passage my memory carried me back to a conversation Mr. McE. and I held some short time previously, wherein I remarked that the examination was much severer than the one in which I graduated. The whole force of the remark went to show the improvement that had taken place in the institution, not but what I thought the examination that I passed in 1868 fully up to the standard. I immediately wrote to Mr. McEachran, mentioning the affair, and asking if in his paper he alluded to me, and shortly after received a reply, very kind and friendly in its tone, but without a single allusion to the point at issue. I then wrote him again but have received no reply, thence my reason for now putting the remark in its proper sense. It certainly is not pleasant to have one's remarks in a conversation twisted around to make a desired point. But perhaps Mr. McE. misunderstood my remarks, and perhaps he has mislaid my letter, and thence his want of courtesy in not replying.

Regretting that I should have found this explanation necessary and in conclusion, I might remark that all these changes that some gentlemen deem necessary for the benefit of the profession cannot, I consider, at the present time be carried out. The profession, though young in this country, occupies as good a position as it does in the mother country, and since my residence in Canada it has certainly made good steps onward. So, like a young child, let us creep before we can walk, with the old motto, "Excelsior," for a cry.

With every desire that good feeling should exist throughout the profession, and thanking you for your kind indulgence in my inroad on your space, I remain,

Yours obediently,

A. F. COLEMAN, V. S., Ontario.

AMES, IOWA, August 5, 1877.

EDITOR REVIEW:

I am just in receipt of the August number of the REVIEW, and wish to testify to the very valuable character of its contents. It is a cause for no small degree of gratification to see that much of the matter is furnished by those who were my former associates and classmates in the American Veterinary College, and who now hold its diploma. When I remember the many enthusiastic members of the profession I used to meet in New York, I realize how much easier it is to keep up the fire when one has the professional head of the brethren to stand by. To those who are congregated along the rim of the continent where the profession has acquired a respectable foothold, the spectacle presented by a solitary Veterinary surgeon in the midst of thousands of square miles of ring-bones and spavins, whole counties of colic, and continents of hog cholera, must excite mingled emotions of sympathy and envy. Here the peaceful smoke of the firing iron curls its fantastic shapes in honor of his name alone, and he bears all unaided the reproach from the granger of the back county, when he awakes in the morning, and finds that one of his mother porkers has committed infanticide during the night, and no Veterinary surgeon was there to prevent it.

There are some of the experiences of the Western practitioner, if not instructive, might be somewhat amusing to the members of the profession in the older districts.

Here is a specimen case: Early in May last I was called to see a

shorthorn cow, and after getting the history of the case and making a careful examination of all the symptoms, the small, weak pulse of 105, the short and painful breathing, the elevated temperature, the fœtid breath, the pale, bluish mucus membranes, the persistent diarrhœa, and the emaciated condition, I had no hesitancy in diagnosing the disease a case of *tubercle.* Prognosis unfavorable. I prescribed for the cow, but on seeing her a second time, I advised the owner to incur no further expense but to have the cow destroyed and realize for her what he could. This kind of talk did not suit the owner, as she was a cow that if in good health would have possessed considerable value ; so a neighboring "cowleech" was called in, who, of course, diagnosed it a clear case of *hollow horn.*

The gimlet was produced, and the *horns found to be hollow* This was told to me by the owner with a small degree of exultation. The condition of the cow was, however, in nowise improved. In the course of time, Cowleech, No. 2, was called in, who manifested no small degree of surprise that so clear a case of "loss of cud," should have been mistaken by two men making any pretensions to a knowledge of diseases of domestic animals. Greasy rags, bacon rinds, and all other ingredients necessary to an approved wizard bolus were procured and formed into a ball, and pushed down the poor beast's throat. In spite of all this treatment, the cow lingered a couple of weeks longer, and yielded to the disease.

I obtained the privilege of making a post mortem examination, and found my opinions fully confirmed by the pathological conditions.

Such are some of our Western experiences. But it is not all thus. The character and qualifications of the men professing a knowledge of Veterinary medicine in the West are such as to deservedly cause every man setting up such claims to be looked on with suspicion till he has proven himself worthy of the confidence of the people.

I may at a future time have something to say to you on the subject of hog cholera, with which I have been having some rather interesting experience.

M. STALKER, V. S.

"PURPURA HÆMORRAGICA."

August 8th, 1877.

MR. EDITOR :

In your issue of August I read a recorded case of purpura hæmorragica, treated with strychnia with recovery.

I believe the credit (if any) belonging to strychnia as to its therapeutic effects in cases of purpura hæmorragica among us, is cordially accredited to our mutual friend, Mr. Hopkins.

I understand Mr. Hopkins first applied it to what he termed an aggravated case, with no other inten at the time than for its toxicological or experimental effects. But, to his great surprise, the patient recovered. (*Hence the "Bonanza."*)

He commenced with very small doses, say ¼ grain (if my memory serves me), and gradually increased it (at times omitted), carried to the extent of producing prostration, as he termed it, then by using supportive measures, and the ordinary treatment for purpura hæmorragica, he would carry his patients successfully through. I heard Mr. Hopkins state that this treatment was applied to many cases with the same result, viz., recovery.

Practically, among us the use of strychnia in this disease was something new, especially *as applied*, either in Mr. Hopkins' cases or the one reported in your August issue.

Strychnia, also ergotine, had both been used in the human subject previous to this time, as treatment for purpura hæmorragica, both on a different principle and in a different manner of dosing, yet with the same object.

It is not now, nor was it at the beginning of this letter, my intent to discuss the therapeutic action of strychnia; but having carefully read every case (I could get hold of, without making one myself,) treated with strychnia, both those terminating fatally and those terminating favorably, I have failed as yet to discover any improvement whatever in the condition of the patient.

Never have I read of but one case where I thought the drug (strychnia) was properly administered, and that case terminated fatally; in fact, there was not the least abatement in any of the symptoms—he passed straight on through. I do not consider this a test case, either for or against the use of strychnia, yet this is the only case where I thought the medicine was either given on the proper principle (that given by authority,) or in proper quantities.

We are all well acquainted (or should be) with the physiological effects of strychnia; we also should know its general and special therapeutic action, for it is upon this knowledge alone can be based the principles for which it is given, and the results accounted. If not on this principle, then it is applied empyrically, and erroneous and decep-

tive effects are recorded for those which, when properly obtained, would be valuable acquisitions to our much needed therapeutics.

"In order to appreciate the value of a remedy," says Headland, "we must have: 1st, a proper understanding of the pathological condition to be overcome; 2d, a knowledge of the agent we employ." The importance of these two rules is commensurate with the grounds they embrace.

Purpura hæmorragica, by most authorities, is classified among cutaneous diseases, which, like its name, originated from a frequent symptom, cutaneous hemorrhage. It is not due to any special poison, nor to any organic trouble, hence it is not an exanthemata. If the cutaneous hemorrhage was always a symptom, we could consider it a cutaneous disease, but such is not the case. Again, we find other authorities who classify it under scorbutic affections (hæmatic), which is probably the most correct, in consideration that the blood presents the most *lesions*.

If we accept purpura hæmorragica as scorbutic, we must look to the blood for our etiology and treatment.

In relation to the etiology of this disease, we have much yet to learn (which at once depreciates the value of therapeutic measures). From its classification, it should be traceable to an insufficient supply of alimentary principles contained in the food. Such is not distinctly true, since purpura hæmorragica is most often met in *isolated* cases, whereas it should prevail as if it were an epizootic. Again, any *special* dietetic treatment avails nothing. Debility, induced by previous inflammatory disease, poor living, *dripathic*, and last, if not least, *vaso-motor-paralysis*. The latter would appear a secondary consideration, superinduced by the morbid blood changes (believing the blood change to be the primary lesion), purpura hæmorragica involves danger from loss of blood from the different outlets of the body, and extravagations into serous cavities, lungs, etc. Exclusive of these sources of danger, recovery under judicious treatment may be expected. The objects of treatment in cases of purpura hæmorragica, are the restoration of the normal constitution of the blood, increase of vital powers, and restraint of hemorrhage.

If we knew what the exact change or changes of the blood were, it would be easy to apply the proper remedies.

Then we must do the next best thing, and that is, place the patient on the best treatment, both medical and hygenical, that is conducive to good blood and good health, namely, varied and nutritious diet, in small quantities, frequently repeated, good fresh air (roomy box), and, when possible, I think a little exercise excellent.

Medication, tonic and stimulants, especially the former, which should always be *mineral*, especially the *sulphates;* they have a special action on the great mucous tracts, as well as the blood, and, as already stated, the danger is involved in the hemorrhage from the mucous tracts. In relation to the use of stimulants in this diseaae, I do not think we will derive any great benefit, unless the appetite is entirely lost. If the patient retains his appetite, and the tonic remedies are carefully and regularly administered, you need not fear diminished or lost vitality, and recovery will be pretty certain. In reference to molar paralysis—if this condition is present as an important factor, then I could understand the importance of *strychnia* and ergotine. Taking my supposition as true, that it is a secondary condition, would not the nutritious food and tonics relieve the difficulty, in consideration of the fact that the blood must be corrected first, otherwise the strychnia should be given from the *onset* in conjunction with the other remedies.

In relation to the administration of strychnia referred to at the beginning of this letter, I wish to state why it was given in improper quantities, is this: Strychnia belongs to that class of remedies whose value and potency is appreciated only by a relative and continued administration. In the case reported in your last issue, and in all others (excepting one) that I have read of, has this irregularity of doses been carried out, and from these records I fail to appreciate any benefit whatever arising from strychnia (unless it was complete annihilation). Again, powerful remedies like strychnia should be given in a fluid form, if possible; in this way we not only facilitate its absorption, but are surer of its direct effects.

Respectfully,

L. T. Bell, Brooklyn, N. Y.

REPORT OF CASES.

FRACTURE OF THE ULNA.

New York, Sept. 9, 1877.

To the Editor American Veterinary Review:

On the 31st of August I was called to see a sorrel mare that had been frightened and ran away. She had ran a number of blocks, and fallen three or four times. I found her standing in the street, with the off fore leg elevated, with flexion of the humero radial joint, and flexed

at the carpus and fetlock, with the toe about one foot from the ground. On making an examination of the limb, found a slight abrasion of the skin at the posterior portion of the Ulna, and on handling the parts found a complete fracture of the olecranon. I advised the owner to have the animal destroyed, which he did. On making a post mortem examination found that the ulna was broken in an antero-posterior direction, near the articular surface of the radius, destroying the sigmoid notch. The superior portion of the ulna or olecranon was also broken in three pieces. The peculiar position in which I found her standing, I concluded was due to the loss of power of the extensor muscles that attach to the superior portion of the olecranon there by allowing full action of the flexors of the radius. There was also ulceration on the articular surface of the radius.

SAMUEL S. FIELD,
Student to American Veterinary College,
245 E. 24th St., City.

BOSTON, August 24, 1877.

TO THE EDITORS OF THE AMERICAN VETERINARY REVIEW:

GENTLEMEN: With your permission I will describe two recent attacks of illness in a young mare, the property of M. McBarron, Esq., of this city. On the 7th of June last I was first called to her at the stable of Messrs. Warner & Richardson, and informed by the owner that she had been suffering for about three weeks from a kind of distemper. Her condition was then as follows: feverish, pulse fifty-six, breath hot, sharp cough, respirations rough and accelerated, nostrils swollen and tender, septum covered with blisters, copious discharge from nostrils of mucus streaked with blood, mouth hot, intermaxillary glands hard, but not adherent to the jaw, parotids hot and swollen, coat staring, very weak over loins, hind legs swollen, and occasionally ejecting a whitish mucus from vagina. She was inclined to eat a little, and anxious to drink, but did so with difficulty owing partly to soreness of throat. I will not trouble you with the treatment, but merely say that she received excellent care, and in ten days most of the feverishness and soreness of throat had passed off.

The condition of the intermaxillary glands and nostrils—especially the discharge—still continued, and in addition to this the off hock became greatly enlarged from hydrops articuli, probably from a practice she had of thumping it against the stall. As the circulation in the swollen limb became impaired, she was now given daily exercise grad-

ually increased, allowed to pick a little grass, and a fair allowance of nutritious food. Along with this she was given arsenious acid three times daily, commencing with one grain, and gradually increasing to three grain doses; lime was slacked in water where the fumes reached her, and the enlarged glands well rubbed with Iodine ointment. Cloths wrung out of hot water were applied to the hock, and the hoof pared and kept soft so as to offer as little obstruction as possible to the circulation. By the middle of July she had made a good recovery, although some thickening of the hock remained without any lameness. The case gave me considerable anxiety as for some time it had every appearance of terminating in glanders.

She was now given hard drives, and sent to Manchester, New Hampshire, where she again became ill, and was turned out to pasture for a week, then taken up and sent by rail to Boston, where I again took charge of her, at the St. James Stable, on the 14th inst.

August 14.—Found her in the following condition: weak, staggering gait; pulse sixty; respirations forty; low, painful cough; rusty colored discharge from nostrils; urine passing frequently, especially on being moved or when coughing; feces scanty but dark colored; entire absence of sound, and dullness extending over three fourths of area of left lung; dullness over about half of the lower third of right lung, with some friction higher up; and legs swollen.

Treatment.—Gave half of an ordinary cathartic, and a stimulating drink; placed her feet in hot water, and applied stimulants to sides and loins, and as she ate but sparingly, a quart of milk was given noon and night.

August 15.—Lungs same as yesterday; pulse fifty-six. I now noticed that the stall was very wet, and that her urine was passing involuntarily, very clear and intensely acid. Thinking that this might be the result of diuresis and weakness of the bladder, I passed my catheter, in doing so found the external genitals very loose and powerless, and the bladder quite empty, on passing my hand forward, however, into the vagina found it distended till it filled the whole cavity, and clung to the walls of the pelvis, it was half full of urine, the balance being atmospheric air. I now passed my hand into the rectum, and applied pressure to the vagina, expelling both urine and air, when the vagina instead of contracting remained a loose, flabby mass. Having left the catheter inserted in the bladder, I noticed on withdrawing my hand that air passed inwards with a hissing sound. On again inserting my hand per rectum, this time the bladder was found to be distended

to its fullest capacity with air, which pressure expelled as in the other case. I now withdrew both my hand and catheter, and allowed her to stand at ease a moment. Again air began to pass inwards; passing my hand into the vagina I found it again completely filled with air, the meatus remains drawn forwards and downwards, so that the external opening was higher than the vagina, and as urine reached the bladder it was prevented from accumulating there by the pressure of air above. She was unable to expel the urine from her vagina, only when she moved or coughed. The uterus did not appear to be involved. Finding that nothing more could be done, I sponged out the vagina with cold water containing a few drops of nitric acid, gave her dram doses of iodide of potassium in drink three times daily, bi. carb. soda twice, and milk and light food and fomentations as on the previous day.

August 16.—Pulse and respiration improved, secondary cessation distinguishable over about half the former area of dullness, there is still considerable flapping of the nostrils, and a low, timid cough, which causes her to expel some urine though less than formerly. Yesterday's treatment continued.

August 17.—Steadily improving. Lung clearing up; cough easier; rusty discharge from nostril entirely stopped. No urine in vagina, but a little whitish mucus and some air. She urinates naturally. Feces are quite soft, and appetite much improved. There is a long, symmetrical, rope-like swelling extending from the vulva down between the thighs, this commenced to show itself two days ago.

August 21.—She has continued to improve, and is to-day being walked on the floor.

I do not know how many days she had been ailing before I saw her, but the long journey by rail to Boston probably increased her prostration very much.

You must pardon me for troubling you with such a long article. The case was to me quite an interesting one, and so I decided to send it to the REVIEW.

Yours very truly,

WMSON. BRYDEN, V. S.

REGULAR MEMBERS OF THE PROFESSION.

INDUSTRIAL UNIVERSITY,
URBANA, ILLINOIS.

EDITOR AMERICAN VETERINARY REVIEW:

DEAR SIR:—Will you please publish the inclosed list of members of the Royal College of Veterinary Surgeons, which is official, being the same as is published in the Register of the R. C. V. S. for 1877. It seems to be necessary to us, as surgeons, that the public should be fully aware as to who are qualified, and who are not. Only the other day I received a request from a qualified German veterinary surgeon who is practicing in Chicago, and in his letter to me he stated that there were quite a number of men who styled themselves M. R. C. V. S., and on looking over the Register which was sent him, that not one of them appeared on the list, and he stated furthermore that one or two of them had had the impertinence to go into courts of law and swear themselves as qualified Veterinary surgeons. Such men as those have a great tendency, by their false representations, to very much lower our profession in the eye of the public. Still another case can be mentioned. A fellow came to our neighboring town (Champaign), and stated that he was a graduate of the Edinburgh Veterinary College. On searching their Register, no such name is found amongst her alumni.

Yours truly,

F. W. PRENTICE.

Mr.	Thomas Simpson Beech	California	1835
*"	John Bretherton	U. S.	1858
"	George F. Bolton	U. S.	1869
"	Josh Bushman	Washington	1862
"	John Clark	U. S.	1854
"	John Clemenson	U. S.	1843
"	Josh B. Coleman	N. Y.	1869
"	Lawrence H. Cosler	U. S.	1870
"	William Frater	U. S.	1830
"	John T. Frazer	Rochester	1876
"	J. W. Gadsden	Philadelphia, Pa.	1858
"	Charles Gardner	Canada	1844
"	S. Going	New York	1870
"	J. Gregson	Pa., U. S.	1845
"	Edward Haggard	U. S.	1839
"	Alex. Halket	U. S.	1840

Those marked * are deceased.

Mr.	J. M. Heard	U. S.	1871
"	J. C. Hingston	U. S., Bay City, Mich.	1877
"	James W. Hoey	U. S.	1840
"	T. D. Hulme	U. S.	1863
"	W. Irvine	Canada West	1863
"	James L. Irving	U. S.	1870
"	R. Jay	Davenport, Iowa	1866
"	Robert Laidlaw	Albany	1840
"	Alfred Large	N. Y.	1861
"	Charles Lander	U. S.	1830
"	James Law	Cornell University, N. Y.	1861
"	John Lee	U. S.	1831
"	E. Lewis	U. S.	1866
"	W. H. Lillyman	Boston	1840
"	Alexander Lockhart	New York	1865
"	McEachran	Montreal, Canada	1861
"	McDonald James Grant	U. S.	1844
"	William McIntosh	U. S.	1839
"	David Maclachlan	U. S.	1864
"	John Marriott	Guelph, C. W.	1870
*"	Austin Mellor	Philadelphia	1872
"	T. H. Merrick	U. S.	1874
"	E. Moore	Albany	1877
"	Alex. Murray	Detroit, Mich	1862
"	Peter Newton	U. S.	1842
"	William Ormiston	Mexico	1837
"	William Petterson	Montreal	1870
"	John Petley	U. S.	1828
"	Louis V. Plagemann	N. Y.	1863
*"	F. W. Prentice	Illinois Indust. University	1869
"	James Quallett	New York	1851
"	Thomas K. Quickfall	C. W.	1858
"	W. Redmond	Charleston	1833
"	L. Revis	U. S.	1840
"	George Sermon	Montreal	1862
"	George Scully	St. Louis	1858
"	Thomas Shaw	U. S.	1871
"	Whitfield Smith	U. S.	1849
"	Josiah W Stickney	Boston	1859
"	John N. Taylor	West Winfield, N. Y.	1863
"	James Tompson	Canada	1813
*"	Von Nich. Tunzelmann	Canada	1853
"	N. Vasey	Rockford, Ill	1872
"	Alex. Waddel	Quebec	1835
"	William Wallis	Charleston	1818
"	George Wright	Albany	1825
"	Thomas Wyche	Chicago	1865

Those marked * are deceased.

REGULAR GRADUATES OF THE ONTARIO VETERINARY COLLEGE PRACTICING IN THE UNITED STATES.

V. C. Atkinson	Milwaukee	1875
G. W. Bates	Wellington, Mo	1877
J. A. Brackin	Pittsfield, Mass	1873
John Bryce	Erie, Pa	1870
A. S. Cook	Binghamton, N. Y	1872
F. A. Campbell	Canandaigua, "	1874
A. Drinkwater	Rochester, "	1874
John Elliot	Toledo, Ohio	1871
W. C. Fair	Cleveland, "	1871
W. Folsetter	Evansville, Ind	1874
G. Gowland	Seneca Falls, N. Y	1865
R. D. Howard	Castill, N. Y	1875
A. Harthill	Louisville, Ky	1870
J. R. Hayyard	Lexington, "	1875
F. A. Hood	Ogdensburg, N. Y	1875
R. C. Hutchings	Watertown, "	1871
M. J. Henderson	Syracuse, "	1874
W. Langtry	Fort Wayne, Ind	1877
A. McLeod	Jackson, Mich	1872
R. McKenny	Michigan	1873
M. H. McKillop	Chicago, Ill	1877
J. Martin	Lockport, N. Y	1872
T. A. Morrison	Lasalle, "	1872
G. L. Robson	Penn Taw, "	——
M. Sutherland	Saginaw, Mich	1869
M. Stalker	Ames, Iowa	1877
W. M. Thompson	Denver, Col	1872
Rob. Wilson	Whitehead, Ohio	——

VARIETIES AND NEWS.

PROPOSED MEDICAL DEPARTMENT OF CORNELL UNIVERSITY.

At the recent annual meeting of the Trustees of Cornell University, a proposition to establish a medical department of the university in New York City, was referred to the Executive Committee.

LIGHT ON BACTERIA.

A. Downes and T. B. Blunt, announce as a new result in their investigations, that light is inimical to the development of bacteria, and under favorable conditions may prevent their development.—*Scientific American.*

EXPORTATION OF HORSES.

Heretofore the exportation of live stock from this country to Europe had been limited to cattle, sheep and pigs, but lately, thanks to the enterprise of a few gentlemen, horses have been sent to Europe, and have found their a ready market. One of the largest horse dealers of New York City, has within a few months exported and sold in Liverpool and London, not less than 250 coach and trotting horses of all breeds from Kentucky, New York and Michigan, Maine and Vermont. Mr. I. Dahlman, is well satisfied with his enterprise, and intends to furnish our English cousins with many more horses from this country.

SPECIMENS.

SENT TO THE MUSEUM OF THE AMERICAN VETERINARY COLLEGE.

82 & 83. Patented Horseshoes to prevent slipping on Ice, ...C. H. Peabody, D. V. S.
84. Melanotic Tumor from Tail of gray Horse.....J. C. Force, V. S.
85. Scapula with Ossification of Cartilage.....W. H. Wray.
86. Fractured Ulna.....S. S. Field.
87. Seedy Toe, both Fore Feet.....J. L. Robertson, M. D. V. S.
88. Shark's Jaws.....J. C. Force, V. S.
89, 90. Patented Rolling Motion Shoe ?.....A. Liautard, M. D. V. S.
91. Urethral Calculi..E. F. Thayer, V. S., Sec. A. V. R. Assoc., No. 77.

EXCHANGES.

Scientific Farmer, Boston; Country Gentleman, Albany; Scientific American, N. Y.; Medical Record, N. Y.: Journal de l'Agriculture, France; American Agriculturist, N. Y.; Sanitarian, N. Y.; Live Stock Journal, Chicago; Hospital Gazette, N. Y.; Dumb Animals, Boston.

COMMUNICATIONS RECEIVED.

F. S. Billings, Berlin; W. Bryden, Boston; Prof. A. Smith, Toronto, Can.; Prof. McEachran, Montreal, Can.; E. F. Thayer, Boston; M. Stalker, Ames, Iowa; F. W. Prentice, Illinois; L. I. Bell, Brooklyn; S. S. Field, N. Y.; E. Mink, Rochester; Dr. Osler, Montreal.